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EPA Superfund
Explanation of Significant Differences:

BROWN'S BATTERY BREAKING
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EXPLANATION OF SIGNIFICANT DIFFERENCES
BROWN'S BATTERY BREAKING
TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

A. INTRODUCTION

Statement of Purpose.

The Environmental Protection Agency, Region III ("EPA") is issuing this Explanation of Significant Differences ("ESD"), pursuant to its authority under Section 117(c) of the Comprehensive, Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. º 9617(c), and the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), at 40 C.F.R. º 300.435(c)(2)(i). This ESD modifies the July 2, 1992, Record of Decision ("OU-2 ROD") issued for the Brown's Battery Breaking Superfund Site (the "Site") in Tilden Township, Pennsylvania. EPA is the lead agency for the Site, and the Pennsylvania Department of Environmental Protection ("DEP") is the support agency. Specifically, this ESD modifies the groundwater portions of the remedy set forth in the OU-2 ROD. This change revises the cleanup standards with which the groundwater portions of the Selected Remedy must comply, both in the Shallow Alluvial Aquifer as well as the Deep Bedrock Aquifer. EPA has determined that this change does not fundamentally alter the remedy selected in the OU-2 ROD with respect to scope, performance, or cost. In accordance with 40 C.F.R. º 300.825(a)(2), this ESD will become part of the administrative record file located in EPA Region III, 841 Chestnut Building, Philadelphia, PA 19107 and at the Hamburg Borough Library, 35 North 3rd Street, Hamburg, PA 19526.

B. SITE CHARACTERISTICS

The Site is an inactive lead-acid battery processing facility located in Tilden Township, Berks County, Pennsylvania. The facility recovered lead-bearing materials from automobile and truck batteries from 1961 to 1971. The operation involved breaking the vulcanized rubber battery casings, draining acid from the batteries, and recovering the lead-alloy grids, plates and plugs.

From 1961 to 1965, the lead-recovery process used at the Site consisted of placing batteries on their sides on a conveyer belt that carried them to a hydraulic guillotine. The guillotine sliced the top from each battery casing, allowing access to the lead alloy grids. In the early years of operation, the open-top batteries were manually inverted and the sulfuric acid was poured directly onto the ground, along with the battery grids. The empty battery casings were deposited on the ground surface in several areas of the site. Battery grids were loaded onto a dump trailer for transport and resale.

From 1965 to 1971, the battery casings were rinsed with water to remove residual lead, and the rinse water containing residual lead was collected in steel tanks. At the end of each work day, the lead was recovered and shoveled into the dump trailer containing the battery grids. The rinse water was then dumped directly on the ground. Casings were crushed after rinsing. The smaller battery casing pieces were often used as a substitute for road gravel both onsite and offsite.

In the Spring of 1980, DEPs predecessor agency, the Pennsylvania Department of Environmental Resources ("DER"), investigated lead contamination at a dairy farm located near the Site. The dairy farm had become contaminated through the use of crushed battery casings as road cover. The Site was identified as the source of the battery casings. Subsequent testing conducted by DER and the Pennsylvania Department of Health at the Site provided sufficient evidence to indicate that a serious health threat existed on the Site. EPA studied the Site in the fall of 1983 and conducted a Removal Action during the winter of 1983 and spring of 1984. This Removal Action consisted of the temporary relocation of Site residents and excavation and consolidation of battery casings and contaminated soils. In addition, this action included onsite containment of the wastes beneath a low permeability soil cap located in the southwest quadrant of the Site. This area is referred to as the "containment area". The Site was placed on the EPA Superfund National Priorities List CNPL") in June 1986.

EPA began a Remedial Investigation/Feasibility Study ("RI/FS") for the Site in 1988. The purpose of the RI/FS was to characterize the extent of contamination at the Site, quantify risks to human health, and evaluate potential environmental risks and remedial alternatives. Site characterization included sampling and analysis of surface and subsurface soil, ground water, surface water, sediment, ambient air, interior dust and blood-lead levels of onsite residents. A baseline risk assessment was conducted as part of the investigation and includes quantification of risks to human health. An evaluation of remedial alternatives is presented in the Feasibility Study portion of the RI/FS report.

Major findings of the RI/FS include the following:

Onsite surface soils and shallow subsurface soils are contaminated with varying concentrations of lead, ranging from less than 500 mg/kg to more than 60,000 mg/kg.

Soil and groundwater contamination resulted from onsite deposition of battery wastes. These wastes included crushed rubber battery casings, battery acid, and metallic lead grids, posts, and plugs. These materials remain onsite and must be addressed along with contaminated soils.

The shallow groundwater aquifer onsite is contaminated with lead, metals, dissolved solids and acid.

Lead is being transported from the Site to the adjacent Schuylkill River.

The bedrock aquifer onsite is contaminated with sulfate, cadmium, beryllium, manganese, dissolved solids and acid.

C. SIGNIFICANT DIFFERENCES

Selected Remedy For Bedrock Groundwater in the OU-2 ROD

The objective of the bedrock ground water portion of the OU-2 ROD (ie., pumping and treating the bedrock aquifer after further study of the aquifer to trace the extent and direction of contaminant movement) is to reduce the concentration of metal contaminants to background levels so as to eliminate, any impact of the Brown's Battery Site on the local groundwater and surface water.

The Soils and Casings portion of the OU2 ROD is not modified through this ESD.

Description of the Significant Differences

This ESD modifies the groundwater portion of the Selected Remedy to revise the cleanup standard for lead with which the groundwater portions of the Selected Remedy must comply, both in the Shallow Alluvial Aquifer as well as the Deep Bedrock Aquifer. The Performance Standards to be achieved by the Selected Remedy, as specified in Sections IX.B.2. and IX.B.3. of the OU2 ROD, are also modified to reflect this revision.

EPA has now concluded that certain requirements that were formerly considered Relevant and Appropriate are Relevant but no longer Appropriate to the Site because the more stringent groundwater cleanup requirements described in the OU-2 ROD and set forth in 25 Pa. Code Sections 264.97(i) and 264.100(a)(9), which necessitated cleanup of groundwater contamination to background levels, are appropriate to the management of hazardous wastes at RCRA Treatment, Storage and Disposal facilities, rather than facilities such as the Site which has been inactive since 1971. 1

PADEP has identified 5 Ig/l as the cleanup standard for lead in groundwater, pursuant to Act 2, 35 P. S. °° 6026.101-6026.909, as set forth in recently issued statewide, health-based remediation standards, 25 Pa. Code 250, Subchapter C (27 Pa. Bull. 4181, August 16, 1997) ("Act 2 Standards"). EPA accepts the Act 2 Standard for lead (5 Ig/1) for ground water cleanup at this Site. The cleanup level of 5 Ig/l is the Medium Specific Concentration ("MSC") for lead specified in the Act 2 Standards, 25 PA Code Chapter 250, Appendix A, Table 2.

1 25 Pa. Code Sections 264.97(i) and 264.100(a)(9) were not "Applicable" regulations because disposal of hazardous wastes at the Site occurred before these regulations became effective.

For all other contaminants listed in Tables 1 and 2 of the OU-2 ROD, EPA has determined that Act 2 does not, on the facts and circumstances of this remedy, impose any requirements more stringent than the Federal standards. The relevant and appropriate requirements are the Federal Maximum Contaminant Levels ("MCLs") and non-zero Maximum Contaminant Level Goals ("MCLGs") specified as the national primary drinking water levels at 40 C.F.R. Section 141.11-141.16 which were promulgated pursuant to Section 300g-1 of the Public Health Service Act, as amended by the Safe Drinking Water Act, 42 U.S.C. Sections 300f et seq.

D. SUPPORT AGENCY COMMENTS

The above changes to the remedy have been coordinated with DEP pursuant to 40 C.F.R. º 300.435(c)(2)(i). DEP has concurred with the changes to the selected remedy as described in this ESD. A copy of the concurrence letter is attached.

E. AFFIRMATION OF STATUTORY DETERMINATONS

Considering the new information that has been developed and the changes that have been made to the selected remedy, EPA believes that the remedy, as modified by this ESD, remains protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to this remedial action, and is cost-effective. In addition, the revised remedy utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable for this Site.

F. PUBLIC PARTICIPATION ACTIVITIES

This ESD has been made part of the administrative record file and is available for review at the two locations identified below:

United States Environmental Protection Agency
Region III
841 Chestnut Building
Philadelphia, Pennsylvania 19107
(215) 566-3157
Hours: 8:30 a.m. to 5:00 p.m.
Monday through Friday

and

Hamburg Borough Library
35 North 3rd Street
Hamburg, PA 19526
(610) 562-2843
Hours: M, T, Th 1:30-8:30 P.M.

EPA has opened a public comment period from January 12, 1998 to February 10, 1998 to solicit comments on this ESD. Comments should be sent to:

Richard Watman
Remedial Project Manager
United States Environmental Protection Agency
Region III (3HS22)
841 Chestnut Building
Philadelphia, Pennsylvania 19107